

REMARKS/ARGUMENTS

Claims 1, 3, 5-9, 11, 12, and 14-19 are pending in this application. Claims 1, 3, 5-9, 11, 12, and 14-19 stand rejected. In light of the remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

The Specification is objected to for the use of the term “carbohydrate” in place of “hydrocarbon.” The Specification is amended to correct this translation error. Withdrawal of the objection to the specification is therefore requested.

Claims 1, 3, 5-9, 11, 12, and 14-19 stand rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Specifically, the Examiner asserts that there is no support for the term metallization or the metallization being on the substrate in the specification as filed. (Office Action at p. 2 par. 4). Applicant disagrees with this assertion.

As disclosed in the specification as filed and the International Publication of the specification, “located on [the] ceramic substrate 22 are interconnection facilities 24 for interconnecting the various electronic modules.” Such interconnection facilities may comprise printed wire disposed on the ceramic substrate or a separate layer that may comprise aluminum interconnect with other interconnection technologies that would be known to persons skilled in the art. (WO 2004/111581 at p. 3 ll. 18-24). One skilled in the art would readily understand printed wired disposed on the ceramic substrate to be metallization on the substrate. As stated in MPEP 2163.02, the subject matter of the claim need not be described literally in order for the disclosure to satisfy the description requirement. “Metallization” is merely used to describe what has already been disclosed. Thus, the term metallization and the corresponding recitations are not new matter nor should the use of the term metallization result in a rejection under 35 U.S.C. §112, first paragraph. As such, reconsideration and withdrawal of this rejection is requested.

Claims 3, 5-9, 11, 12, 14, 15, 17, and 18 stand rejected under 35 U.S.C. §112 first paragraph for being based on a disclosure, which is not enabling. The limitation “measuring a fluid level in a motor vehicle fuel tank” and specific elements associated therewith are critical essential elements but are not included in the claims and not enabled by the disclosure. The disclosure states that the modules on the substrate may incorporate passive electronic modules, active electronic chips, magnetically driven chips, such as those that are based on the Hall effect and chips that operate based on ultrasound for measuring fuel level and other.

An inventor need not explain every detail since he is speaking to those skilled in the art. What is conventional knowledge is read into the disclosure. 210 USPQ 689,691 in re Houbeth (CCPA 1981). The modules are described in the International Publication of the specification as electronic chips of a fuel pump control of an electronically controlled fuel pump. (WO 2004/111581 at pg. 2, par. 2). One skilled in the art would, given the disclosure, understand the circuitry that is inherently disclosed by such statements. To that end, U.S. Patent No. 6,629,457 (the “457 Patent”) discloses evaluation units 9 and 24. The units are comparable to the presently claimed modules and would be understood by one skilled in the art to be such modules as disclosed by the ‘457 Patent. Thus, the present specification is enabled and reconsideration and withdrawal of this rejection is requested.

Claims 1, 3, 7-9, and 16-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,490, 920 (“Netzer”) in view of U.S. Patent No. 3,950,653 (“Kirkpatrick”). Applicant requests reconsideration and withdrawal of this rejection.

The Examiner acknowledges that Netzer fails to specifically disclose that “no part of the electronic circuit arrangement is exposed to any fuel or vapor”. Applicant notes that in part, this is accomplished by “soldering a metal cap to metallization on said substrate to form an encapsulated

space, said one or more electronic modules being disposed in said encapsulated space and separated from any fuel or vapour outside said encapsulated space.” However, to cure this deficiency, the Examiner includes Kirkpatrick. However, the combination of Netzer and Kirkpatrick would not result in a system within the scope of the present claims.

As previously argued Netzer includes a capacitive circuit arrangement on an outside external surface of the substrate, exposed to the liquid fuel. As shown in Fig. 6 of Netzer, an enclosure is provided that protects a portion of the sensor substrate from contact with the liquid. However, the electronic modules or circuits comprising capacitors CC1 or CC2 on the substrate are exposed to the fuel and vapor outside the encapsulated area. Kirkpatrick discloses a circuit board contained within a pipe-like structure. Applicant respectfully submits that the combination of Netzer and Kirkpatrick would merely result in placing Netzer’s device within the pipe-like structure as shown in Kirkpatrick’s Figures 1 and 3. In other words, the substrate 14 in Kirkpatrick would be Netzer’s device 82. Thus, this combination fails to render the claims obvious.

Further, Applicant notes that the present invention utilizes magnetically driven or ultrasound modules for use in the vehicle fuel tank, as set forth in claims 6, 12, and 15. Kirkpatrick (and Netzer) disclose capacitive sensors. Specifically, Kirkpatrick discloses a capacitive sensor for measuring grain level in a bin having electrodes 15 and 16. (Kirkpatrick at col. 2, ll. 35-41). Nothing in Kirkpatrick would lead one skilled in the art to use Kirkpatrick’s device in a fuel system.

Claims 5, 11, and 14 stand rejected under 35 U.S.C. §103(a) as unpatentable over Netzer and Kirkpatrick in view of U.S. Patent No. 5,821,455 (“Yamamoto”). Applicant requests reconsideration and withdrawal of this rejection. Yamamoto was not added to cure the deficiency in Netzer and Kirkpatrick discussed above but for its teaching of a ceramic substrate. However,

Yamamoto does not cure the deficiency noted above. Therefore, the combination fails to render claims 5, 11, and 15 unpatentable.

Applicant has responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested. If the Examiner believes an interview would be of assistance, the Examiner is encouraged to contact the undersigned at the number listed below.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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